

Sl



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/735,547	12/14/2000	Seok Moon Kang	HI-024	6563
34610	7590	05/06/2004	EXAMINER	
FLESHNER & KIM, LLP			LE, NHAN T	
P.O. BOX 221200			ART UNIT	
CHANTILLY, VA 20153			PAPER NUMBER	

2685

DATE MAILED: 05/06/2004

8

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/735,547

Applicant(s)

KANG, SEOK MOON

Examiner

Nhan T Le

Art Unit

2685

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 December 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 14-23 is/are allowed.
- 6) ☒ Claim(s) 1, 8 and 9 is/are rejected.
- 7) ☒ Claim(s) 2-7 and 10-13 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

Applicant's election with traverse of Group I, claim 1-23 in Paper No. 7 is acknowledged. The traversal is on the ground(s) that the subject matter of each of the designated inventions is sufficiently related that a thorough search for the subject matter of each of the designated inventions would encompass a search for the subject matter of the remaining designated inventions. This is not found persuasive because Group I is drawn to a code division multiple access base station system while Group II is drawn to the method of estimating signal degradation in communication system. Group I and II are different inventions and requiring search in different classification (ie. 455.561 for group I and 455/67.11 for group II). Therefore, the groups are distinct from each other and have separate utility as shown before in the restriction.

The requirement is still deemed proper and is therefore made FINAL.

Specification

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The abstract of the disclosure is objected to because it exceeds 150 words.

Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1, 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted prior art in view of Borg (US 5,768,689).

As to claim, Applicant's admitted prior art teaches a code division multiple access (CDMA) base station system, comprising: a channel card, configured to modulate and output a first signal and receive and demodulate a second signal (see fig. 1, number 103, page 2, lines 16-18); a transmitter configured to transmit the first signal outputted from the channel card through a first antenna (see fig. 1, numbers 104, 106, 108, page 3, lines 5-7); a receiver configured to receive a signal from a second antenna and provide the received signal to the channel card (see fig. 1, numbers 105, 107, 109, page 3, lines 8-14); a first processor configured to provide an interface among the channel card, the transmitter, the receiver (see fig. 1, number 101, page 1, lines 10-12); a power level measuring device, to measure a power level of a final end of the base station, and provide the power level to the first processor (see fig. 1, number 110, page 2, lines 8-10); and a second processor, configured to provide an interface between the first processor and an exchange (see fig. 1, number 102, number 12-13). Applicant's

admitted prior art fails to teach a radio frequency (RF) characteristic analyzer, configured to monitor output signals of the transmitter and the receiver and analyze characteristics of the transmitter and the receiver, and generating a result of the monitoring and analysis wherein the result of the monitor being configured to the first processor. Borg teaches a transceiver testing unit (see fig. 2, numbers 10 and 28) wherein the transceiver testing unit performs a test to verify transmitter and receiver links and to evaluate signal strength and quality, uplink and downlink on all channels (see fig. 2, number 10; transmitter output signal, number 28; receiver output signal). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Borg into the system of Applicant's admitted prior art in order to perform signal strength and quality testing (as suggested by Borg, see col. 5, lines 12-19).

As to claim 8, Applicant's admitted prior art teaches a code division multiple access (CDMA) base station system, comprising: a transmitter configured to modulate and transmit a first signal through a first antenna (see fig. 1, numbers 104, 106, 108, page 3, lines 5-7); a receiver configured to receive and demodulate a second signal through a second antenna (see fig. 1, numbers 105, 107, 109, page 3, lines 8-14). Applicant's admitted prior art fails to teach a radio frequency (RF) characteristic analyzer coupled to monitor and analyze an output signal of each of the transmitter and receiver and determine an extent of signal degradation, and to provide a monitoring signal based on the level of degradation. Borg teaches a transceiver testing unit (see fig. 2, numbers 10 and 28) wherein the transceiver testing unit performs a test to verify

transmitter and receiver links and to evaluate signal strength and quality, uplink and downlink on all channels (see fig. 2, number 10; transmitter output signal, number 28; receiver output signal). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Borg into the system of Applicant's admitted prior art in order to perform signal strength and quality testing (as suggested by Borg, see col. 5, lines 12-19).

As to claim 9, the modified applicant's admitted prior art teaches the RF characteristic analyzer comprises: a first analyzing circuit coupled to monitor and analyze an output signal of the transmitter in real time; a second analyzing circuit coupled to monitor and analyze an output signal of the receiver in real time (see fig. 2, number 10; transmitter output signal, number 28; receiver output signal); The modified Applicant's admitted prior art fails to teach an alarm circuit coupled to receive analyzed data from the first and second analyzing circuits, and generating the monitoring signal. Borg also teaches an alarm circuit coupled to receive analyzed data from the first and second analyzing circuits, and generating the monitoring signal (see Borg col. 5, lines 45-55). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Borg into the system of modified Applicant's admitted prior art in order to alert of the faulty test results (see Borg col. 5, lines 45-55).

Allowable Subject Matter

Claims 2-7, 10-13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

As to claim 2, the applied reference fails to teach an input/output circuit configured to communicatively couple the RF characteristic analyzer with the first processor as cited in the claim.

As to claim 10, the applied reference fails to teach a band rejection filter coupled to receive the transmitter output signal and filter out a prescribed band of the signal; a first analog-to-digital (A/D) converter coupled to convert an output of the band rejection filter into a digital signal; a first low pass filter coupled to the A/D converter to pass only a low frequency digital signal; a first signal processor coupled to determine whether a strength of the low frequency digital signal is increasing; a first output circuit coupled to change a sign of an output signal of the first signal processor and generate a first output signal; a second signal processor coupled to determine if the strength of the low frequency digital signal is greater than a prescribed threshold value; and a second output circuit coupled to logically combine the first output signal with an output of the second signal processor and generate a second output signal.

Claims 14-23 are allowed:

Regarding to claim 14, Borg (US 5,768,689) teaches transceiver tester, Hanninen (US 5,423,071) teaches monitoring and alarm circuitry for a base station transmitting supervising signals to one or more mobile radio stations, Mizikovsky (US 5,255,307) teaches status indicator control for cellular mobile telephone system,

Shimizu et al (US 4,989,204) teaches high throughput communication method and system for a digital mobile station when crossing a zone boundary a session. The teaching of these prior arts either combine or alone fails to teach the combination of input/output module, first analyzing circuit, second analyzing circuit, and alarm circuit as cited in the claim.

Dependent claims 15-23 are allowable for the same reason.

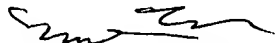
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nhan T Le whose telephone number is 703-305-4538. The examiner can normally be reached on 08:00-05:00 (Mon-Fri).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban can be reached on 703-305-4385. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Nhan Le


EDWARD F. URBAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600